

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Initially, the undersigned would like to thank the Examiner for the courtesy and assistance extended on behalf of the Applicants during the telephonic interview conducted on April 6, 2011, with the undersigned.

In the Official Action, the Examiner continues to reject claims 17 and 18 under 35 § U.S.C. 112, first paragraph, as failing to comply with the written description requirement. With regard to claim 17, the Examiner argues that the recitation on page 6, lines 15-26 is not supported in the specification.

In the Official Action, the Examiner continues to reject claims 17 and 18 under 35 § U.S.C. 112, second paragraph. In this regard, the Examiner also feels that the last subparagraph of claim 17 is unclear.

In response, claim 17 has been amended to remove the recitation “a plurality of triangular openings extending outward from the slide hole, an inner end portion of each of the triangular openings being coupled to the slide hole.” Furthermore, claim 17 has been further amended as suggested by the Examiner during the telephonic interview to remove the recitation “the support member having a slide hole with a diameter smaller than that of the distal opening extending along the axis thereof.”

Since the Examiner has not made a prior art rejection of claims 17 and 18, Applicant assumes that the same would be allowed if the rejections under 35 § U.S.C. 112, first and second paragraphs, is overcome.

In the Official Action, the Examiner rejects claims 1, 7-9 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Kokai Publication No. 4-329944 (hereinafter

“Kokai”) in view of U.S. Patent No. 4,943,290 to Rexroth, et al. (hereinafter “Rexroth”). Furthermore, the Examiner rejects claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Kokai and Rexroth and further in view of U.S. Patent No. 5,846,241 to Kittur, et al. (hereinafter “Kittur”).

In response, Applicant respectfully traverses the Examiner’s rejections under 35 U.S.C. § 103(a) for at least the reasons set forth below. However, independent claims 1 and 17 have been amended to clarify their distinguishing features. Specifically, claim 1 has been amended to recite a radio knife comprising:

- an electrically insulative flexible sheath having a flow channel inside, a distal end portion and a proximal end portion, the distal end portion of the sheath having a distal opening and an axis;

- a support member which closes the distal opening of the sheath, the support member having a slide hole with a diameter smaller than that of the distal opening extending along the axis thereof;

- an operating wire axially movable in the sheath;

- an electrode portion which has a distal end portion and a proximal end portion and of which at least a part forms a rod-shaped portion, the proximal end portion of the electrode portion being coupled to the operating wire, the rod-shaped portion being passed through the slide hole for axial projection and retraction;

- a control section which is provided on the proximal end portion of the sheath and controls the operating wire to project and retract the electrode portion in the axial direction, the control section having a high-frequency current supply portion which supplies a high-frequency current to the electrode portion;

- a liquid feed portion which is provided on the proximal end side of the sheath and feeds a liquid through the flow channel inside the sheath towards the distal opening; and

- a plurality of rectangular openings extending outward from the slide hole, an inner end portion of each of the rectangular openings being in communication with the slide hole and another end of each of the rectangular openings comprising a wall formed entirely in the support

member, wherein an entire width of each of the plurality of rectangular openings is set to a dimension such that it cannot be penetrated by the electrode portion.

The amendment to claim 1 is fully supported in the original disclosure. Thus, no new matter has been introduced into the disclosure by way of the present amendment to independent claim 1.

Turning first to the prior art, Rexroth discloses, at the sectional view illustrated in Figure 6, a plurality of channels 75-78 formed by a plurality of support walls 80-83 and the electrode 60. Such a configuration in which each of support walls 80-83 are formed and embedding the same into the duct means 70 is very complicated. In addition, even if they are integrally formed with the duct means 70 (see Rexroth, at column 8, line 66 to column 9, line 3), its production is very complicated and expensive.

On the other hand, the support member of claim 1 is formed to close a distal opening of the sheath and has a slide hole and a plurality of rectangular openings. One end of each of the rectangular openings is in communication with the slide hole while another end of each of the rectangular openings comprises a wall formed entirely in the support member.

Accordingly, the support member recited in claim 1 having the slide hole and a plurality of rectangular openings needs only to be provided to close the distal opening of the sheath and a complicated structure or complicated production, such as is disclosed in Rexroth are not required. That is, if the support member is arranged on the sheath, along the longitudinal direction of the sheath as disclosed in Rexroth, problem arise that the flexibility of the sheath is decreased, the production cost (e.g., molding costs) of the sheath are increased, and the sliding resistance of the knife is increased negatively affecting the operability of the knife.

With regard to the rejection of claims 1, 7-9 and 15 under 35 U.S.C. § 103(a), Independent claim 1 is not rendered obvious by the cited references because neither the Kokai publication nor the Rexroth patent, whether taken alone or in combination, teach or suggest a radio knife having the features discussed above and recited in independent claim 1. Accordingly, claim 1 patentably distinguishes over the prior art and is allowable. Claims 7-9 and 15, being dependent upon claim 1, are thus at least allowable therewith.

With regard to the rejection of claim 10 under 35 U.S.C. § 103(a), since independent claim 1 patentably distinguishes over the prior art and is allowable, claim 10 is at least allowable therewith because it depends from an allowable base claim.

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,

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